

**METHODS AND APPARATUS FOR CLUSTERING AND PREFETCHING
DATA OBJECTS**

Abstract of the Disclosure

5 Techniques for managing data objects in conjunction with a computer system are
provided. In a technique for clustering data objects on a disk storage device, the
invention comprises maintaining a log of at least a portion of accesses (e.g., read and/or
write operations) to the data objects; determining from the maintained log a cluster
comprised of data objects accessed at substantially similar times; and storing the data
objects comprising the cluster in close proximity to one another on the disk storage
10 device. In a technique for prefetching data objects on a disk storage device, the invention
comprises receiving a request for a data object in a cluster; determining from the log a
probability that at least one other data object in the cluster may be subsequently
requested; and, in response to the probability being not less than a predetermined value,
retrieving both the requested data object and the at least one other data object. Such
15 clustering and prefetching techniques substantially reduce the number of storage device
seeks.

1500-206-APP